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| 09/628,398 | 08/01/2000 | David A. Selby | RSW9-2000-0080-US1 | 5649 |

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| EXAMINER |
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BLECK, CAROLYN M

| ART UNIT | PAPER NUMBER |
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3626

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/628,398

Applicant(s)

SELBY, DAVID A.

Examiner

Carolyn M Bleck

Art Unit

3626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice to Applicant

1. This communication is in response to the amendment filed 21 July 2004. Claims 1-26 are pending. Claims 1-4, 7,-9, 11, 14-17, 20-22, and 24 have been amended.

Terminal Disclaimer

2. The terminal disclaimer filed on 21 July 2004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 09/628,400 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(A) Claim 1 currently recites that the system-wide reservation information includes "past reservation information including information unrelated to said particular perishable commodity." It is unclear to the Examiner what type of information the Applicant intends

Art Unit: 3626

to claim with the presently recited "information unrelated to said particular perishable commodity." It is respectfully submitted that such a limitation is tantamount to a negative limitation, which attempts to define the information in terms of what it is not, rather than what it is. As such, the scope of the claim cannot be ascertained. Claims 2-13 inherit the deficiencies of claim 1 through dependency and are also rejected.

Claim 14 recites similar wording to claim 14. As such, the analysis of claim 1 may be applied to claim 14.

Claims 15-26 inherit the deficiencies of claim 14 through dependency and are also rejected.

Claim 1 recites the limitation "comparing said gathered past system-wide reservation information unrelated to said particular perishable commodity" in lines 10-12. There is insufficient antecedent basis for this limitation in the claim. The claim recites two types of perishable commodities (those that have already perished and those with reservations that have not perished.) It is unclear which perishable commodity the Applicant is referencing in the current step. Claims 2-13 inherit the deficiencies of claim 1 through dependency and are also rejected.

In light of the 112 2nd problems, the examiner is interpreting the claims and applying prior art as best possible using these interpretations. These interpretations of claim language are for examination purposes only. The Examiner will interpret the "perishable commodity" to be a seat on a flight and the "unrelated information" to be other seats on the flight.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung (4,775,936).

(A) As per claims 1-2, Jung discloses a method utilizing a computer including a processing means (col. 3 lines 18-27) for determining a recommended overbooking level for a scarce resource such as seats on a vehicle, e.g. an aircraft, wherein the recommended level pertains to an airplane flight, such as a flight that travels daily between Detroit and Miami (reads on "unperished instance of a first perishable commodity") that will occur in the future (note Jung's discussion of forecasting the booking level) (col. 5 lines 1-45) comprising:

(a) obtaining through an information receiving means and storing for later use, historical traffic flow information including the number of groups booked on a vehicle and the number of groups actually transported on a vehicle, wherein the historical traffic flow information relates to flights that travel between Detroit/Atlanta and Atlanta Miami daily, and wherein there must be at least four flight records for each flight to ensure an accurate historical basis for calculations (col. 1 line 65 to col. 2 line 27, col. 3 lines 27-53, col. 5 lines 1-45, col. 7 line 65 to col. 8 line 22, col. 9 lines 43-52);

(b) receiving passenger reservations through a booking means for a flight from Detroit to Miami that will occur in the future, wherein the number of passenger that can be booked on the vehicle is set at an optimal level (col. 5 lines 1-45, col. 7 line 65 to col. 8 line 22, col. 9 lines 43-52, col. 10 lines 25-29);

(c) determining an optimal booking level using an overbooking program calculated by taking the average of three other booking levels:

- The first is a demand-based booking level which is based on average "no show" factors. The demand-based overbooking level is calculated such that the vehicle would always be full given average booking statistics;
- The second is an oversale-based booking level which is based on average booking statistics and a standard deviation value which takes predictability into account. The oversale-based booking level is calculated such that the capacity of the vehicle will be oversold a predetermined percentage of the time;
- The final booking level is a prediction-based booking level. This booking level predicts the optimal booking level for the next flight by averaging the demand-based and oversale-based booking levels and determining the linear relationship of the averages. A weighting factor is also applied to the prediction-based booking level. The weighting factor is a function of the mathematical credibility (i.e. the standard error of estimate) of the third booking level. This booking level is found by the following equation $PBBL = M(N+1) + B$, wherein $N+1$ is the next flight to depart;

Art Unit: 3626

- The recommended booking level is then determined by averaging the demand-based booking level, the oversale-based booking level and the weighted prediction-based booking level (col. 2 lines 28-52 and col. 7 lines 14-30) and;
- (d) displaying the recommended booking level in an overbooking report (col. 8 lines 36-40).

It is respectfully submitted that the recommended booking level is a form of a materialization level as Jung discloses the recommended booking level as a percentage, wherein the level is between 101%-200% for flights which "close" i.e., the flight overbooks. Further, the booking level includes the demand-based booking level which in practical terms is the actual demand for a seat on an aircraft based on historical data including group reservation data (i.e., the materialization of a group reservation) (col. 5 lines 54-68). Although Jung does not include outputting the demand-based booking level (i.e., the materialization level), it is respectfully submitted that the skilled artisan would have found it an obvious modification to Jung's method to output this level with the motivation of quickly adjusting computer overbooking levels based on calculations (Jung; col. 1 lines 58-63).

Furthermore, as per the amendments to the claims 1-2, the Examiner provided relevant citations from Jung regarding these limitations above. Further, it is respectfully submitted that the Examiner has used the following logic in interpreting the Jung reference. Firstly, Jung discloses a flight occurring in the future between Detroit and Miami (col. 5 lines 1-45) which is considered to be a form of Applicant's current group reservation for information "an unperished instance of a first perishable commodity".

Art Unit: 3626

Secondly, Jung discloses historical flight unit data stored in a database pertaining to at least four flights between Detroit and Atlanta and Atlanta and Miami which is considered to be a form of Applicant's past reservation information for perishable commodities other than for said first perishable commodity. Thus, it is the position of the Examiner that Jung discloses both a current group reservation for information "an unperished instance of a first perishable commodity" and "past reservation information for perishable commodities other than for said first perishable commodity" given the broadest reasonable interpretation of Jung.

(B) Claims 14-15 repeat the subject matter of method claims 1-2, respectively, as computer-readable code stored on media rather than as a series of steps. As the underlying processes of claims 1-2 have been shown to be fully disclosed by the teachings of Jung in the above rejections of claims 1-2, it is readily apparent that the processing means, disk drive in a computer, and computer programs (Jung; col. 3 lines 18-28 and col. 3 line 64 to col. 4 line 8) disclosed by Jung provide the means to carry out these steps. As such these limitations are rejected for the same reasons given above for method claims 1-2, and incorporated herein.

7. Claims 3-13 and 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung (4,775,936) as applied to claims 1 and 14 above, and further in view of Bowen et al. (5,648,900).

Art Unit: 3626

(A) As per claims 3, 5-6, 8-10, and 12, the relevant teachings of Jung are as discussed in the rejections above, and incorporated herein.

Jung fails to expressly disclose past reservation information including POS (Point-of-Sale) information pertaining to past and current reservations and the demographic information about group coordinators who made past group reservations. Bowen discloses controlling and monitoring of group travel related services including storing in a storage unit information related to a historical and current group control record comprising information such as the name and ID of the owner and organizer of group travel, the group name, the wholesaler's address, the phone number of the owner, the inventory items obtained from a master inventory, the date contained on the inventory item on which unused inventory must be returned to a provider, an airline record locator, departure and arrival cities, the dates of travel (col. 3 lines 25 to col. 4 line 63, col. 8 lines 18-30, col. 10 lines 32-60, col. 11 line 63 to col. 12 line 22, col. 14 line 16 to col. 17 line 25, and col. 20 lines 3-40).

At the time the invention was made, the skilled artisan would have found it an obvious modification to include the aforementioned components of Bowen within the method of Jung with the motivation of enabling airlines and other parties to more easily track group reservations (Bowen; col. 1 lines 50-55) and thus ensuring advance bookings are at a level which maximizes profits while at the same time minimizing dissatisfaction with supply (Jung; Abstract).

Art Unit: 3626

(B) As per claims 4 and 7, Jung discloses obtaining through an information receiving means and storing for later use, historical traffic flow information including the number of groups booked on a vehicle and the number of groups actually transported on a vehicle (col. 1 line 65 to col. 2 line 27 and col. 3 lines 27-53) and the next flights departing (col. 2 lines 28-52 and col. 7 lines 14-30).

(C) As per claims 11 and 13, Jung discloses historical information related to the capacity of each passenger airplane in the fleet (col. 3 lines 28-48) and information on the next flight to depart including the capacity of the airplane (col. 3 lines 28-48 and col. 7 lines 20-25).

(D) Claims 16-26 repeat the subject matter of method claims 16-26, respectively, as computer-readable code stored on media rather than as a series of steps. As the underlying processes of claims 16-26 have been shown to be fully disclosed by the teachings of Jung in the above rejections of claims 16-26, it is readily apparent that the processing means and computer programs (Jung; col. 3 lines 18-28 and col. 3 line 64 to col. 4 line 8) disclosed by Jung provide the means to carry out these steps. As such these limitations are rejected for the same reasons given above for method claims 16-26, and incorporated herein.

Response to Arguments

8. Applicant's arguments filed 21 July 2004 have been fully considered but they are not persuasive. Applicant's arguments will be addressed below in the order in which they appear in the response filed 21 July 2004.

(A) On pages 10-11, Applicant attempts to differentiate the reservation information recited in the pending claims from that included in the Jung reference. More specifically, Applicant argues that reservation information as "defined" in the specification is related to all reservation information, not just the "traffic information" of the Jung reference. In response, the Applicant's arguments suggest that the Applicant intends a particular definition with the recitation of the term reservation information" in the current claim language. However, the Applicant does not point out and the Examiner was unable to find a definition of this term in the current claim language or in the originally filed disclosure that supports narrower interpretation of the term. At most, the Applicant has relied upon broad, non-committal or exemplary language in the specification. (e.g. reservation information includes commodity details... and/or POS information relating to reservations for perishable commodities). (Applicant's specification, page 11, lines 12-19, description of past and current reservation information.) In addition, Applicant cites page 17, line 15 to page 18, line 17 of the specification as defining reservation information. However, after reviewing this citation, there is no such definitions. Thus, the Examiner must give the claim language the broadest reasonable interpretation, and the Examiner understands the term "reservation information" to include various types of information.

(B) Applicant argues the newly added limitation of the system gathering and comparing data unrelated to a particular perishable commodity. In particular, the applicant argues the newly added limitation overcomes the prior art of record because Jung gathers data that is related to the perishable commodity.

In response, the Examiner could not ascertain the scope of the term "information unrelated to said particular perishable commodity". (See 112 2nd paragraph rejection).

For example, if the commodity is an airline seat, information on 2 separate seats on the same flight may be reasonably interpreted as unrelated data (i.e. dealing with separate commodities) or related data (dealing with the same flight). Similarly, information on 2 separate flights may be deemed "related" because they are both related to flight information, or unrelated, because they are distinguished by some other attribute (i.e. different destinations, origins, etc.)

In light of the 112, 2nd paragraph issues raised by applicant's amendment's, the Examiner has given the prior art the broadest reasonable interpretation, and maintained the previous ad rejection. If the Applicant intends to claim specific attributes of reservation information, the Examiner suggests including particular details (i.e. reciting specific examples of commodity details, or demographic data details) in the current claim language. Also additional details, (e.g. specific calculation steps or algorithms/equations), which make the comparing and calculating steps unique to the type of data recited, may further narrow the interpretation of these terms and steps for the purposes of applying art.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The cited but not applied prior art teaches a consumer profiling system (6,298,348) and a system for synthesizing travel cost information (5,191,523).

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn Bleck whose telephone number is (703) 305-3981. The Examiner can normally be reached on Monday-Thursday, 8:00am – 5:30pm, and from 8:30am – 5:00pm on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached at (703) 305-9588.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 306-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9306 or (703) 872-9326 [Official communications]

(703) 872-9327 [After Final communications labeled "Box AF"]

(703) 746-8374 [Informal/ Draft communications, labeled
"PROPOSED" or "DRAFT"]

Application/Control Number: 09/628,398

Page 14

Art Unit: 3626

Hand-delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive,
Arlington, VA, 7th Floor (Receptionist).



CB

October 4, 2004



JOSEPH THOMAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600